



CANNABIS:

The Facts You Need to Know

Learn what scientific research says about how cannabis affects health.

From Scholastic and the National Institute on Drug Abuse (NIDA)

In recent years, you may have gotten mixed messages about cannabis, often referred to as marijuana. Many states have made it legal for people aged 21 or older to use the drug. You may have heard a person or company make claims about the health benefits of cannabis, or you may know a

trusted adult who has used it. Still, you have probably also been told that using the drug can be harmful for you.

How *does* cannabis affect health? Read on to find out what science has uncovered and to learn about the risks of using the drug for teens.

What Is Cannabis?

Cannabis products—flower, vaping cartridges, edibles, or any other formulation designed for people to consume—are typically made from the leaves and flowers of cannabis plants. These leaves and flowers contain many types of a specific class of chemical compound called cannabinoids. Cannabinoids can also be made artificially in a lab, and certain cannabinoids are found naturally in other plants, in the human body, and in the bodies of other animals. In the human body, these naturally occurring cannabinoids, called “endocannabinoids,” play a role in normal brain development and function. The most well-studied cannabinoids found in cannabis are tetrahydrocannabinol (THC) and cannabidiol (CBD).

When a person uses a cannabis product containing THC, the chemical enters the bloodstream and travels through the body. THC



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attaches to receptors on brain cells and changes the way the cells send, receive, and process signals. This can disrupt the normal functioning of the brain. There are receptors that respond to THC in many parts of the brain, which is why the drug can impact many different body functions—from thinking to coordination to heart rate.

Cannabinoids as Medicine

There are prescription medications approved by the Food and Drug Administration (FDA) that contain cannabinoids derived from cannabis or created in a lab. These medications can offer health benefits for some people with specific medical conditions. For example, a

prescription form of lab-made THC is used to treat certain types of nausea and vomiting, such as what cancer patients often experience as a side effect of chemotherapy.

These FDA-approved medications are very different from other forms of cannabis available at dispensaries or sold illegally. They were rigorously tested to make sure they were safe and effective for their intended purpose, and the facilities in which they are manufactured are regulated to meet federal safety standards.

Although FDA-approved medications that contain specific cannabinoids can have health benefits for some people, this does not mean that other cannabis





products have been proven to treat medical issues safely and effectively. You may have heard that some people use cannabis and cannabis-related products to help relieve depression, anxiety, and the nausea associated with pregnancy. However, cannabis and cannabinoids are not approved by the FDA to treat these conditions. In fact, the FDA has not approved the cannabis plant itself for any health condition. There are also real health risks associated with using cannabis products. Individuals concerned about any health conditions should speak

with their doctor or another qualified member of their health care team.

THC and the Teen Brain

Using cannabis affects the way the brain works, and these changes can be harmful. Teens are especially at risk for experiencing harmful effects of THC because the adolescent brain is still developing. During the teen years, brain cell connections are built and strengthened to support everything from decision-making to hand-eye coordination. The brain isn't fully developed until a person reaches their mid-20s,

which makes the teen brain more vulnerable to the effects of THC than the brain of someone who is older. This is in part because THC can impact the normal function of naturally occurring endocannabinoids in the brain and elsewhere in the body.

Short-Term Effects

Because THC affects so many parts of the brain, cannabis use can lead to a wide range of short-term impairments. For example, using the drug may slow a person's reaction time and impair coordination, making it dangerous to drive a car.

Cannabis use can also cause problems with learning, attention, and memory. High amounts of THC can also increase heart rate.

In some cases, cannabis has been linked to severe symptoms that may require emergency care, such as vomiting, anxiety, shaking, and even seizures and psychosis. In some parts of the country, the number of cannabis-related emergency visits has been increasing in recent years. One factor that may be contributing to the rise: The average amount of THC in cannabis is far higher today than it was in the past. Concentrated forms of cannabis, which can be consumed through vaping devices, can also have very high levels of THC.

Longer-Term Problems

If a person uses cannabis regularly and heavily (usually considered daily or near daily use) during adolescence, it may interfere with critical development and have a long-term impact on brain function. On average, youth who regularly use cannabis have poorer school outcomes than those who don't. Over time, regular use may lead a person to develop cannabis use disorder, in which a person's continued use of the drug causes significant problems in their life, such as health issues or problems at work, school, or home. More severe forms of cannabis use disorder may be considered cannabis addiction. Many factors affect whether a person will develop addiction to a drug, but the younger a

person is when they start using a drug regularly, the higher the risk. A 2021 study found that about 11% of adolescents (ages 12–17) developed a cannabis use disorder within 12 months of their first cannabis use versus about 6% of young adults (ages 18–25).

Using cannabis may be especially risky for young people whose genetics, family history, and other factors put them at a higher likelihood of developing psychotic disorders like schizophrenia. Studies have shown that cannabis use may trigger the onset of these conditions.

The bottom line: No matter how laws may be changing for adults, the scientific evidence shows that, for teens, using cannabis poses real, and potentially serious, health risks.

What About CBD?

CBD, or cannabidiol, is another chemical found in cannabis. Unlike THC, CBD is not “psychoactive” and does not produce a high on its own. Because most CBD products are not carefully produced or rigorously tested, it can be unclear how much CBD or other ingredients are in them and whether labels are accurate. Some CBD products do not contain any THC, but some contain trace amounts or more. You may have heard of CBD products like lotions or gummy candies that claim to have health benefits. Some studies are looking at whether CBD might help with certain conditions, like anxiety and addiction, but more research is still needed. CBD can interact with or reduce the effectiveness of certain prescription medications. For these reasons, it is important to understand that CBD may have serious effects and to discuss your questions with your health care team.